

REMARKS

This amendment is responsive to the Office Action mailed May 27, 2009. In the Office Action, Claims 1-22, 24, and 26-41 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ferstenberg et al. (US 6,968,318) in view of Keiser et al. (US 6,505,174).

Minor typographical amendments have been made to Claims 1, 7, and 12 to replace the phrase "executing on a computer" with "executing in the computer system," which has clear antecedence in the claims. Minor amendments have also been made to Claims 34-36, 40, and 41, changing "when" to "if." These amendments do not narrow the scope of the claims nor are the amendments required for purposes of patentability. Claims 1-22, 24, and 26-41 remain pending in the application.

After carefully considering the cited references and the comments provided in the Office Action, applicant submits that the pending claims are in fact patentable over the cited art. Applicant therefore respectfully requests reconsideration of the claims and allowance of the application.

Claims 1-6, 17, 19, and 24 Are Patentable Over Ferstenberg and Keiser

Claim 1 reads as follows:

1. A computer-implemented method of providing a published price for a security, wherein the published price is available to a plurality of market participants in a market to execute a trade for the security, the method comprising:

under control of instructions executed by one or more processors in a computer system:

notifying a set of first computer processes of a proposed price for buying or selling the security, wherein the set of first computer processes represents a subset of the plurality of market participants, and wherein a trade for the security at the proposed price is not executable at the market,

determining whether any of the first computer processes has offered an improved price for the security, wherein the improved price is higher than the proposed price for buying the security or lower than the proposed price for selling the security, and

if an improved price has been offered, providing the improved price as a published price to the plurality of market participants, wherein the market participants can execute a trade for the security at the published price, and

wherein the notifying, determining, and providing are performed by a second computer processes executing in the computer system.

The disclosures of Ferstenberg and Keiser (separately and in combination) fail to teach or suggest all of the elements of Claim 1.

The Office Action (page 2) cited Ferstenberg as allegedly teaching the element of "notifying a set of first computer processes of a proposed price for buying or selling the security, wherein the first set of computer processes represents a subset of the plurality of market participants." In this regard, the Office Action referred to Col. 45, lines 39-64, of Ferstenberg. However, this paragraph merely refers to delivering price quotes via currently available "quote feeds."

The prices that are provided by such quote feeds are *published* prices; that is, the prices represent market prices for the financial commodities at issue. As explained in Ferstenberg, quote feeds "either broadcast all quotes/trades of financial commodity prices or are capable of responding to a price query only for one commodity at a time." (See Col. 45, lines 40-43.) Further, "a database of such prices . . . provides the up-to-the-moment prices of commodities participating in the exchange." (See Col. 45, lines 50-52.) These prices are publicly distributed and are executable at a market. Publishing prices via a quote feed is not equivalent to "notifying a set of first computer processes of a proposed price for buying or selling the security . . . wherein a trade for the security at the proposed price is not executable at the market," as claimed in Claim 1.

It should be noted that Claim 1 uses different terms to refer to a "*published* price" and a "*proposed* price." A "published price" is not the same as a "proposed price." Claim 1 explicitly recites "wherein the market participants can execute a trade for the security at the published price" while "a trade for the security at the proposed price is not executable at the

market." (Emphasis added.) While Ferstenberg may teach the use of a quote feed that broadcasts market prices for buying or selling financial commodities, Ferstenberg does not teach a process of "notifying a set of first computer processes of a proposed price," as claimed.

The Office Action also cited Ferstenberg at Col. 49, lines 63-67; and Col. 50, lines 1-10 (equivalently stated as Col. 49, line 63, to Col. 50, line 10), but this portion of Ferstenberg merely teaches the existence of alternative order-manager system architectures:

Other order-manager system architectures can be used. For example, in an alternative in order to improve intermediary reliability by limiting external access, the ticker plant price server can be linked to the exchange driver instead of to the intermediary. Similarly, the tape reporting external interface can be linked to the exchange driver. In a different embodiment, the intermediary and the exchange driver may be combined into one process; the intermediary may establish direct connections with client interfaces in order to obtain orders and return exchange results. Also, as noted, the intermediary machine 74 can be implemented using several machines. In this case, the system configuration component of database 72 would contain the addresses and communication links between such machines, as well as the machine for each e-agent of each particular participant.

This portion of Ferstenberg says nothing about "notifying a set of first computer processes of a proposed price for buying or selling the security," as recited in Claim 1. It merely suggests different architectures for linking various elements in a system, such as a ticker plant price server, an exchange driver, and a tape reporting external interface.

Furthermore, Ferstenberg discloses nothing about "a first set of computer processes," which according to Claim 1 "represents a subset of a plurality of market participants." In Ferstenberg, the information provided in the quote feed at Col. 45, lines 39-64, is broadcast, i.e., sent to all of the market participants.

The Office Action (page 2) conceded that Ferstenberg fails to teach or suggest the elements of "determining whether any of the first computer processes has offered an improved price for the security, wherein the improved price is higher than the proposed price

for buying the security or lower than the proposed price for selling the security, and if an improved price has been offered, providing the improved price as the published price to the plurality of market participants." In this regard, the Office Action instead relied on Keiser. However, the disclosure of Keiser does not overcome the deficiencies of Ferstenberg.

The Office Action (page 3) referred to the abstract, Col. 6, lines 45-65, and Col. 27, lines 10-25, of Keiser, but these portions of Keiser merely reference well-known processes in which a user can execute a trade based on a published buy or sell price. See, e.g., the abstract of Keiser which refers to a virtual specialist program that "generates a market price." See also Keiser at Col. 6, lines 46-50 ("The present invention accepts buy and sell orders from traders for the derivative financial instruments, sets a market price based on the supply and demand, and participates in the market as a trader in order to minimize price volatility.")

The Office Action quoted Claim 22 of Keiser (at Col. 27, lines 10-25), but this portion of Keiser only describes a method in which a market price in a computerized trading system is regulated using buy-sell trading imbalances. This disclosure in Keiser does not teach or suggest "determining whether any of the first computer processes has offered an improved price for the security, wherein the improved price is higher than the proposed price for buying the security or lower than the proposed price for selling the security, and if an improved price has been offered, providing the improved price as the published price to the plurality of market participants."

Since neither Ferstenberg nor Keiser, alone or combined, teaches or suggests all of the elements of Claim 1, a *prima facie* basis for rejection of Claim 1 has not been established. Accordingly, the rejection of Claim 1 under 35 U.S.C. § 103(a) should be withdrawn and the claim allowed.

Claims 2-6, 17, 19, and 24 depend either directly or indirectly from Claim 1, and therefore are patentable for at least the same reasons presented above with respect to Claim 1.

Claims 2-6, 17, 19, and 24 are also patentable for the additional subject matter they recite which is not taught or suggested by the cited art.

Furthermore, it is notable that *for all the dependent claims* in the present application, the Office Action cited the same portion of Ferstenberg, namely, Col. 45, lines 39-64; Col. 49, lines 63-67; and Col. 50, lines 1-10. As noted by the Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 U.S.P.Q.2d 1385, 1395-97 (2007), the key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reasons why the claimed invention would have been obvious. See also M.P.E.P. § 2143. Applicant respectfully submits that the Office Action has improperly relied on a blanket citation of the above portions of Ferstenberg to reject all of the dependent claims without providing a clear articulation of the reasons why the invention as claimed in each of the dependent claims would have been obvious.

For at least these reasons, applicant submits that the rejection of dependent Claims 2-6, 17, 19, and 24 is improper and should be withdrawn.

Claims 7-11 and 26 Are Patentable Over The Cited Art

Claim 7 reads as follows:

7. A computer-implemented method of participating in pricing of a security at a market at which trades are made with respect to the security, the method comprising:

under control of instructions executed by one or more processors in a computer system:

receiving a proposed price for the security from a second computer process, wherein the second computer process is providing the market, and wherein a trade for the security at the proposed price is not executable at the market,

determining whether to improve upon the proposed price for the security by offering an improved price that is higher than the proposed price for buying the security or lower than the proposed price for selling the security, and

when the determination is affirmative, offering the improved price to the second computer process, which improved price can be provided by the second computer process as a published price to a plurality of market participants at the market, and a trade at the

published price being executable by the market participants at the market,

wherein the receiving, determining and offering are performed by a first computer process executing in the computer system.

As with Claim 1 discussed above, the disclosures of Ferstenberg and Keiser fail to teach or suggest all of the elements recited in Claim 7.

For example, Ferstenberg fails to teach or suggest a method that includes "receiving a proposed price for the security from a second computer process, wherein the second computer process is providing the market, and wherein a trade for the security at the proposed price is not executable at the market." As discussed above with respect to Claim 1, a "proposed price" is not the same as a "published price." The cited passage in Ferstenberg at Col. 45, lines 39-64, refers to prices that are published via a quote feed. The passage in Ferstenberg at Col. 49, line 63, to Col. 50, line 10, refers to various alternative system architectures. There is no disclosure in Ferstenberg of "receiving a proposed price [that] . . . is not executable at the market."

Ferstenberg also fails to teach or suggest the elements of "determining whether to improve upon the proposed price for the security by offering an improved price that is higher than the proposed price for buying or lower than the proposed price for selling, and when the determination is affirmative, offering the improved price to the second computer process, which improved price can be provided by the second computer process as a published price to a plurality of market participants at the market, the published price being executable by the market participants at the market."

Acknowledging the above deficiencies in Ferstenberg, the Office Action further relied on the disclosure of Keiser. However, Keiser fails to supply the teachings that are missing in Ferstenberg and therefore does not support a *prima facie* rejection of Claim 7.

As with Claim 1, the Office Action cited the abstract, Col. 6, lines 45-65, and Col. 27, lines 10-25, of Keiser, but these passages merely refer to well-known processes for trading

securities based on published buy and sell prices. Keiser's use of buy-sell imbalances in computing matching projected price movements for setting a market price does not constitute "determining whether to improve upon [a] proposed price for [a] security by offering an improved price that is higher than the proposed price for buying or lower than the proposed price for selling," as recited in Claim 7.

Keiser neither teaches nor suggests "determining whether to improve upon the proposed price for the security . . . ," and "offering the improved price to the second computer process, which improved price can be provided by the second computer process as a published price to a plurality of market participants at the market, the published price being executable by the market participants at the market." For at least these reasons, a person of ordinary skill in the art could not combine the disclosures of Ferstenberg and Keiser and achieve what is claimed in Claim 7. Since the cited references do not support a *prima facie* rejection of Claim 7, applicant submits that Claim 7 should be allowed.

Claims 8-11 and 26 are dependent on Claim 7 and thus are patentable for at least the same reasons presented above with respect to Claim 7. Applicant further submits that Claims 8-11 and 26 are patentable for the additional subject matter they recite, which is not taught or suggested by Ferstenberg and Keiser. Claims 8-11 and 26 should be allowed.

Claims 12-16, 18, and 20-22 Are Patentable Over The Cited Art

Claim 12 reads as follows:

12. A computer-implemented method of setting a price for a security, the method comprising:

under control of instructions executed by one or more processors in a computer system:

maintaining an order book for a market at which trades are made with respect to the security, said order book including orders to buy or sell specified quantities of the security at respective prices, the lowest sell order price of the booked orders being the book sell price, the highest buy order price of the booked orders being the book buy price,

engaging in a price discovery procedure with a set of first computer processes before responding to a request for a current buy or sell price of the security, wherein the price discovery procedure produces a discovered price for the security, and

providing the discovered price as the current buy or sell price of the security to a plurality of market participants participating in the market, the discovered price being higher than the book buy price or lower than the book sell price,

wherein the maintaining, engaging and providing are performed by a second computer process executing in the computer system.

Applicant submits that the Office Action has not established a *prima facie* case of obviousness of Claim 12. Ferstenberg and Keiser, alone or in combination, do not teach each and every element of Claim 12, nor is the subject matter claimed in Claim 12 suggested in any form by Ferstenberg and Keiser. The Office Action is therefore deficient in setting forth a factual basis that supports an obviousness rejection of Claim 12.

Notably, Ferstenberg does not teach a method of setting a price for a security that includes "engaging in a price discovery procedure with a set of first computer processes before responding to a request for a current buy or sell price of the security, wherein the price discovery procedure produces a discovered price for the security" and "providing the discovered price as the current buy or sell price of the security to a plurality of market participants participating in the market, the discovered price being higher than the book buy price or lower than the book sell price."

Conceding that Ferstenberg is deficient with respect to the above-quoted elements of Claim 12, the Office Action relied on the disclosure of Keiser. However, Keiser is also deficient with respect to the elements of Claim 12. Disclosure of a virtual specialist program that "generates a market price" (see, e.g., the abstract of Keiser) does not constitute disclosure of a price discovery procedure that produces a discovered price that is higher than the book buy price or lower than the book sell price, as claimed in Claim 12. A current book buy price or sell price *is* a market price, whereas according to Claim 12, the price discovery procedure

produces a discovered price that is higher than the book buy price or lower than the book sell price.

The disclosure of Keiser at Col. 6, lines 45-65, and Col. 27, lines 10-25, also fails to support an obviousness rejection of Claim 12, as the disclosure in Keiser in this regard does not teach or suggest the claimed subject matter.

Thus, even if Ferstenberg and Keiser were combined (which applicant denies is proper), the resultant combination does not disclose or suggest all of the elements of Claim 12. Consequently, Claim 12 is not obvious and is patentable over Ferstenberg and Keiser.

Claims 13-16, 18, and 20-22 depend from Claim 12 and thus are patentable for at least the same reasons presented above with respect to Claim 12. Applicant further submits that Claims 13-16, 18, and 20-22 are patentable for the additional subject matter they recite, which is not taught or suggested by the cited art. Accordingly, Claims 13-16, 18, and 20-22 should be allowed.

Claims 27-33 Are Patentable Over The Cited Art

Claim 27 is directed to a computing system for providing a published price for a security to a plurality of market participants at a market at which trades are made with respect to the security. The computing system includes a notification component executing on at least one computer processor, wherein the notification component is configured to notify a set of the plurality of market participants of a proposed price for trading the security and a trade for the security at the proposed price is not executable at the market.

Furthermore, as claimed, the computing system includes an evaluation component that is configured to determine whether any of the set of market participants has offered an improved price for the security, wherein the improved price is higher than the proposed price for buying or lower than the proposed price for selling. If an improved price has been offered, the evaluation component is configured to provide the improved price as the published price

to the plurality of market participants, wherein the market participants can execute a trade for the security at the published price. The notification component is configured to notify the set of market participants of the proposed price prior to the evaluation component providing the published price.

Applicant respectfully submits that, for at least reasons similar to those discussed above, Ferstenberg and Keiser do not disclose the computing system claimed in Claim 27. In particular, neither Ferstenberg nor Keiser teaches "a notification component . . . configured to notify a set of the plurality of market participants of a proposed price for trading the security," and "an evaluation component . . . configured to determine whether any of the set of market participants has offered an improved price for the security, wherein the improved price is higher than the proposed price for buying or lower than the proposed price for selling, and if an improved price has been offered, then providing the improved price as the published price to the plurality of market participants." Claim 27 should thus be allowed.

Applicant also submits that Ferstenberg and Keiser fail to teach or suggest the elements disclosed in dependent Claims 28-33, which should be allowed for at least reasons similar to those discussed above.

Claims 34-37 Are Patentable Over The Cited Art

Claim 34 is directed to a computer-accessible medium containing computer program instructions. The instructions, if executed, cause a computer to participate in pricing of a security by receiving a proposed price for the security from a computer processes, wherein the computer process is providing a market at which trades are made with respect to the security, and wherein a trade for the security at the proposed price is not executable at the market. Further, the instructions, if executed, cause the computer to determine whether to improve upon the proposed price for the security by offering an improved price that is higher than the proposed price for buying the security or lower than the proposed price for selling the security, and when the determination is affirmative, then offer the improved price to the

computer processes. The improved price can be provided by the computer processes as a published price to a plurality of market participants at the market, and a trade at the published price being executable by the market participants at the market.

For at least reasons similar to those discussed above with respect to Claim 7, applicant submits that the disclosures in Ferstenberg and Keiser do not teach or suggest the computer-accessible medium claimed in Claim 34. Claim 34 should thus be allowed. Additionally, Ferstenberg and Keiser fail to teach the elements disclosed in dependent Claims 35-37, and thus, Claims 35-37 should be allowed.

Claims 38 And 39 Are Patentable Over The Cited Art

Claims 38 and 39 are system claims written in means plus function form, and thus encompass the computer structures and equivalents thereof, as described in the specification, that perform the recited functions. Applicant has reviewed the corresponding computer structures in view of the cited art, and submits that Claims 38 and 39 are in allowable condition for at least the same reasons that Claims 1 and 12 are patentable over the cited art.

Claims 40 and 41 Are Patentable Over The Cited Art

Claim 40 is directed to a computer-accessible storage medium containing computer program instructions for providing a published price for a security. The instructions, if executed, cause a computer to: notify a set of first computer processes of a proposed price for buying or selling the security, wherein a trade for the security at the proposed price is not executable at the market, determine whether any of the first computer processes has offered an improved price for the security, wherein the improved price is higher than the proposed price for buying or lower than the proposed price for selling, and if an improved price has been offered, provide the improved price as the published price to the plurality of market participants. The market participants can execute a trade for the security at the published price.

Claim 41 depends from Claim 40 and recites "instructions, if executed, further cause the computer to compare a current book price to a most recent trade price and decide to notify the first computer processes of the proposed price when the current book price is different than the most recent trade price."

For at least reasons similar to those discussed above with respect to Claims 1 and 6, applicant submits Claims 40 and 41 are patentable over Ferstenberg and Keiser. Withdrawal of the rejections of Claims 40 and 41 is warranted.

Information Disclosure Statements

As a final matter, applicant respectfully requests consideration of the Information Disclosure Statement (IDS) that was submitted with applicant's Request for Continued Examination (RCE) on September 9, 2008. Applicant also requests consideration of the IDS submitted herewith, which includes prosecution documents from co-pending and co-owned U.S. Application Nos. 11/469,378; 11/469,385; 11/515,362; and U.S. Patent No. 7,398,244.

Initialed copies of these IDSs are requested with the next action in this application.

CONCLUSION

As discussed above, the disclosures of Ferstenberg and Keiser do not support a *prima facie* rejection of Claims 1-22, 24, and 26-39 under Section 103. Accordingly, allowance of the application is merited. Issuance of a Notice of Allowance at an early date is requested.

Respectfully submitted,

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